

AMENDMENTS TO THE CLAIMS

In the claims:

This Listing of Claims replaces all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Currently Amended) A peptide ~~comprising wherein the peptide is a purified peptide~~ having SEQ. ID NO.:1 derived from human transcription factor SIM2 beginning at the 558th marker of human transcription factor SIM2 and ending at the 566th marker of human transcription factor SIM2, wherein the peptide is capable of transducing a biologically active, functional ~~or~~ and regulatory molecule into prokaryotic cells or eukaryotic cells.
2. (Canceled)
3. (Currently Amended) The peptide of claim 1, wherein the biologically active functional or regulatory molecule is any one of a protein, a DNA fragment, an RNA fragment, a carbohydrate, a lipid or a chemical compound.
4. (Currently Amended) The peptide of claim 1, wherein a resulting fusion protein consisting of the peptide and the biologically active, functional and/or regulatory molecule is transduced into the cells of prokaryotes or eukaryotes and capable of being administered in vivo through administration routes ~~comprising~~ consisting of intramuscular, intraperitoneal, intravein, oral, nasal, subcutaneous, intradermal, mucosal and inhaling routes.
5. (Currently Amended) A recombinant expression vector ~~comprising wherein the vector is~~ a DNA sequence encoding a peptide comprising SEQ. ID NO.:1 derived from human transcription factor SIM2 beginning at the 558th marker of human transcription factor SIM2 and ending at the 566th marker of human transcription factor SIM2.
- 6-29. (Canceled)

30. (Currently Amended) A method of ~~facilitating the transduction of~~ transducing a peptide, a biologically active, functional or/and regulatory molecule into a prokaryotic or eukaryotic cell comprising:

preparing a peptide construct ~~comprising~~ wherein the peptide construct consists of a purified peptide having SEQ. ID NO.:1 derived from human transcription factor SIM2 beginning at the 558th marker of human transcription factor SIM2 and ending at the 566th marker of human transcription factor SIM2; wherein the peptide construct includes and a biologically active, functional ~~or/and~~ regulatory molecule; and

delivering the peptide construct *in vivo* to a subject through administration routes comprising intramuscular, intraperitoneal, intravein, oral, nasal, subcutaneous, intradermal, mucosal and inhalation routes.

31-37. (Canceled)